CENTRAL INSTITUTE OF AERO-ENGINES (TsIAM)

MOSCOW, USSR

1. THE CENTRAL INSTITUTE OF AERO-ENGINES IMENI P.I. BARANOV (TsIAM) IS THE CENTER OF THEORETICAL RESEARCH FOR AIRCRAFT ENGINE DESIGN AND IS THE SOURCE OF MOST OF THE ADVANCES IN SOVIET AERO-ENGINE TECHNOLOGY. THIS INSTITUTE ORIGINATED AS AN OFFSHOOT OF THE CENTRAL AERO-HYDRO-DYNAMICS INSTITUTE (TsAGI) BEFORE WORLD WAR II AND ITS MAIN FACILITIES WERE LOCATED WITHIN THE CITY OF MOSCOW. THE OBJECTIVES OF TsIAM HAVE BEEN STATED AS: THE STUDY OF AN IMPROVEMENT ON NEW ENGINE DESIGNS; THE TESTING OF ENGINES, LIFE AND ENDURANCE; PROVISION OF BASIC DATA; AND TROUBLE SHOOTING. SINCE ONLY SPORADIC INFORMATION IS AVAILABLE ABOUT THE WORK WHICH GOES ON AT TsIAM, THE ANALYSIS OF THE MOSCOW PLANT'S EXTENSIVE TEST FACILITIES PROVIDED AN INSIGHT INTO THE SCOPE OF PROBLEMS AND TESTS CONDUCTED THERE. VARIOUS REPORTS REFER TO SUCH EQUIPMENT AS: 4 TEST BEDS, EACH CAPABLE OF 400 LB/SEC MASS FLOW CAPACITY; A TEST BED WHERE GAS TURBINES OF THRUSTS UP TO 40,000 LBS COULD BE MEASURED; ALTITUDE TEST CHAMBERS; AND AN ALTITUDE TEST PLANT FOR TURBO-PROP AND TURBO-JET ENGINES.

2. DURING THE VISIT OF THE SOVIET AVIATION DELEGATION TO THE UK FROM 19 APR TO 3 MAY 64, V.Y. LITVINOV, HEAD OF A LABORATORY OF THE TsIAM

AND A.G. IVCHENKO, HEAD OF THE AIRCRAFT ENGINE DESIGN BUREAU AT ZAPOROZHYE INDICATED SOME OF THE PRESENT RESPONSIBILITIES OF THE INSTITUTE, ITS RELATIONSHIP WITH DESIGN BUREAUS, AND MENTIONED A NEW INSTALLATION OF THE INSTITUTE. THE FOLLOWING ARE DIRECT QUOTES TAKEN FROM THE UK REPORT SUMMARIZING THIS VISIT, ON THESE SUBJECTS: "THE MAJOR RESPONSIBILITY OF THE INSTITUTE IS FOR SPECIAL TESTS OF ENGINES SUCH AS HIGH ALTITUDE TESTS, HIGH TEMPERATURE TESTS, ICING PHENOMENA, ETC. TsIAM PRODUCES (AIRCRAFT ENGINE) SPECIFICATIONS AND THE OKBs (DESIGN BUREAUS) PREPARE PROJECT DESIGNS IN OPEN COMPETITION."

"LITVINOV SAID THAT AT PRESENT THE MAJOR PROBLEMS CONCERNED LENGTHENING THE LIFE OF ENGINES AND THE DEVELOPMENT OF SUPERSONIC POWERPLANTS. HE WENT ON TO SAY THAT SINCE THE MOSCOW CITY COUNCIL HAD FORBIDDEN THEM TO ERECT ANY MORE BUILDINGS WITHIN THE CITY, A BRANCH OF TsIAM HAD BEEN OPENED "OUTSIDE" BUT GAVE NO FURTHER DETAILS ON ITS LOCATION. HE DID, HOWEVER, SAY THAT THE HIGH ALTITUDE TEST CENTER WAS RUN OFF THE CHEAP HYDRO-ELECTRIC POWER PROVIDED BY THE STALINGRAD GES, AND WAS ABLE TO TEST ENGINES UP TO 25 TONNES SLST (SEA LEVEL STATIC THRUST). ACCORDING TO IVCHENKO THE SUPERSONIC ENGINE TEST FACILITY HAD BEEN WORKING FOR SOME TIME BUT HE WOULD GIVE NO INDICATION OF ITS LOCATION."

25X

25X

[redacted]

10 October 1965

3. [redacted] REVEALED THAT A LARGE AEROSPACE CENTER IS LOCATED 6 NM WEST OF THE RAMENSKOYE FLIGHT TEST CENTER AND IN CLOSE PROXIMITY TO MOSCOW/MYACHKOVO AIRFIELD. THE CENTER APPEARED TO CONTAIN FACILITIES FOR DEVELOPMENT AND EVALUATION TESTING OF PROPULSION SYSTEMS AND ADVANCED AIRCRAFT.

4. THIS MISSION REVEALS THAT THE FACILITY IS SURROUNDED BY A SECURITY FENCE AND IS RAIL SERVED. FACILITIES INCLUDE A LARGE ATMOSPHERIC AND ENVIRONMENTAL TEST BUILDING, A GAS DYNAMICS FACILITY,FIVE LARGE "L" TYPE TEST CELLS WITH SILENCERS, AND TWO STEAM PLANTS,(ONE OF WHICH IS UNDER CONSTRUCTION). ALSO INCLUDED, BUT NOT ANNOTATED ON THE GRAPHIC, ARE TWO LARGE TRANSFORMER YARDS, AND UNIDENTIFIED AREA, AND A LARGE ADMINISTRATION AND SUPPORT AREA.

25X1

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

[redacted] 25X1

TOP SECRET [redacted] 25X1

25X1

CENTRAL INSTITUTE OF AERO-ENGINES
MOSCOW, USSR
55-34N 37-56E

TOP SECRET [redacted] 25X1

25X1

25X1